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ABSTRACT

This document contains policies and standards to guide the design and evaluation of elementary schools in the Santa Fe Public School District. These policies and standards can be used for a variety of purposes: to serve as a checklist to evaluate existing schools, to identify capital outlay needs to bring all schools to minimum standards, and to serve as a basis for new school design. The document is divided into three sections addressing: (1) the school site (size, location, and quality; site accessibility; and site features); (2) school plant assessment (exterior and interior building components, heating/ventilation/air conditioning, plumbing, electrical/telecommunications, safety/security, and school plant maintainability); and (3) adequacy and environment for education (adequacy--size and relationships, and environment). (Appendices present criteria for assignable square footage, a needs analysis for a prototypical elementary school, a handicapped accessibility checklist, and an illustrative plan.) (EV)

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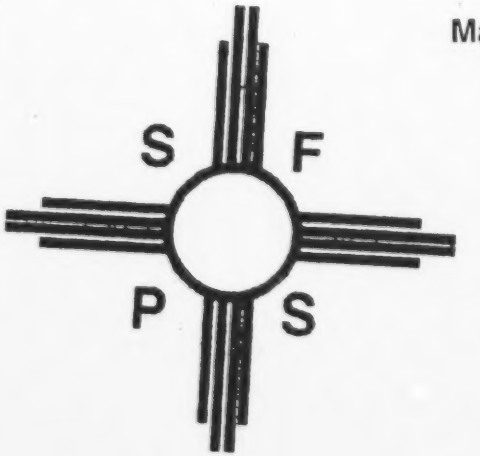
# Santa Fe Public Schools
# Facilities Master Plan

# Elementary School Planning Standards

May, 1994

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# Site and School Guidelines

## Introduction

This document contains policies and standards that guide the design and evaluation of elementary schools in the Santa Fe Public School District. The document is divided into three sections covering:

1.0 The School Site
- Size, Location and Quality
- Site Accessibility
- Site Features

2.0 School Plant Assessment
- Exterior and Interior Building Components
- Heating/Ventilation/Air Conditioning
- Plumbing
- Electrical/Telecommunications
- Safety/Security
- School Plant Maintainability

3.0 Adequacy and Environment for Education
- Adequacy (Size and Relationships)
- Environment

**Facility Planning Standards and Policies**

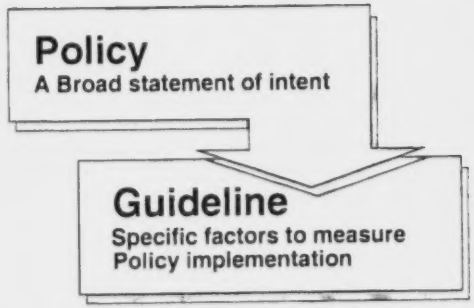
Schools serve a vital role in the community. Their design impacts the lives of thousands of people daily: as a learning environment for our children; a place of employment for teachers, administrators and staff; and as a focus of neighborhood and community activities. For all endeavors, SFPS seeks to provide facilities that are safe and appropriate for the activities taking place.

SFPS facility policies and standards are explicit statements about how school facilities should perform to support the educational and other needs of the district. The facility policies and standards are used for a variety of purposes:

- To serve as a checklist to evaluate existing schools. This analysis will result in a comparative permanent record of buildings and grounds;
- To identify capital outlay needs for bring all schools to minimum standards;
- To serve as a basis for new school design.

Facility **policies** are broad statements of intent while **standards** are specific factors to measure the implementation of the policies. All standards are based on the assumption that facilities exist to support the instructional (curricular) needs of the district.

**Meets Guideline?** ✔

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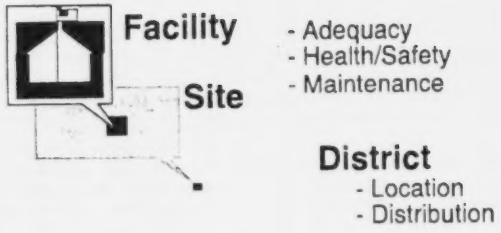
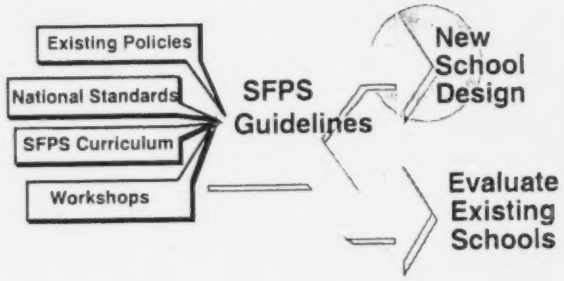
The policies and guidelines address concerns at the district-wide scale (primarily the location and distribution of facilities) and at the site and facility scale (primarily concerned with the adequacy and environment of the spaces provided, health/safety issues, and maintenance concerns). It is anticipated and encouraged that the policies and guidelines will be reviewed and refined as time goes on. The intent of this document is to make explicit the ideas that are important in our facilities. Policies are indicated in bold type. Guidelines are indented and written in italics. Illustrations and explanatory notes are in the right-hand column.

The policies and guidelines contained in this document were first developed as part of Albuquerque Public Schools Facilities Master Plan. They are based on an assessment of national standards, analysis of existing facilities and and extensive workshops with curriculum planning staff and school principals and teachers. The guidelines were adapted for Santa Fe Public Schools through assessment of the latest school facilities constructed and workshops with principals at each school level. It is expected that these guidelines will be modified periodically to reflect evolving goals of the Santa Fe Public School district.

**Note**:
The guidelines owe a large debt to the *Guide for School Facility Appraisal* developed by Harold L. Hawkins, Ed.D. and H. Edward Lilley, Ph.D., in cooperation with the Council of Educational Facility Planners International. This guide served as the conceptual base from which adaptations were made in order to adjust to the unique characteristics of SFPS. *The Facility Condition Survey Standards* developed by the Jefferson County Public Schools in Colorado was also an excellent resource.




**Guidelines address different scales of concerns**



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## Major Site and Facility Ideas

Major ideas within this document include:

- Schools should be located in areas convenient to the student population in a manner that minimizes busing and promotes student, parent and community access to the school.

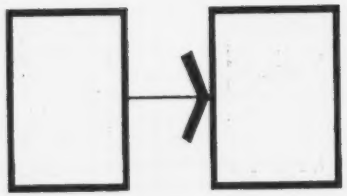
- Schools should be safely accessible to pedestrians and vehicles and provide a clear and safe separation of:
  - Buses
  - Parent drop-off/pick-up
  - Service access.

- Site and facilities should provide an environment that promotes learning opportunities to the extent possible.

- Site and facilities should provide a safe and healthy environment for learning in accordance with appropriate codes and ordinances.

- Site and grounds should be designed for cost effective operation and ease of maintenance.

- School facilities should provide opportunities to adjust to programmatic (instructional and community) and technological changes. This includes:
  - Flexibility of existing spaces to meet a number of purposes
  - Ability to expand
  - Ability to accommodate new communication and information technologies into learning environments.



Provide Flexibility To Meet New Circumstances

- School sites and facilities should be organized in a clear and consistent manner that:
  - Centralizes common use facilities to the population(s) served (media center, cafeteria/kitchen, rest rooms, workrooms)
  - Provides natural light to learning areas
  - Separates "noisy" from "quiet" activities
  - Promotes ease of supervision and security (controlled building access - control of functions, after hour use)
  - Considers special accessibility needs
  - Provides covered (protected) circulation

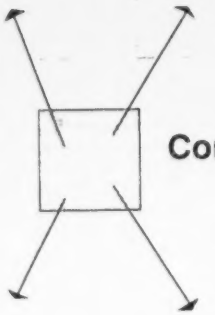
- School facilities should provide the opportunity for community and after hour use.

- School spaces should meet instructional and functional needs of the activities taking place.

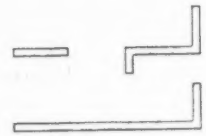
- School sites and buildings should provide a pleasant environment for students and staff and be a positive addition to the community.

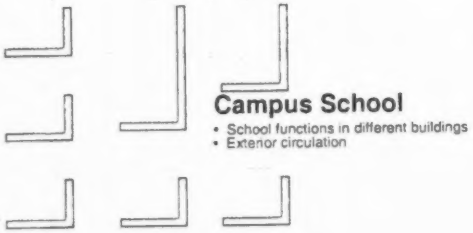
An illustrative plan of the latest SFPS elementary school is included in appendix d.

SFPS schools come in many shapes and sizes. There are many different facility design options to meet the facility policies and standards contained in this document.



**A central core with convenient classrooms can be implemented in a number of ways**



# 1.0 The School Site

This section discusses standards for the school site in terms of:

- Location/Surroundings/Size
- Pedestrian and Vehicular Accessibility
- Site Features
- Safety/Security
- Maintenance

***Policy 1.1 School Location***

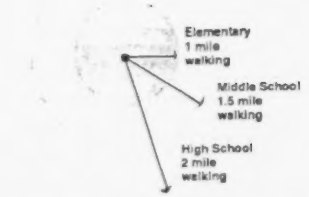
**Schools should be conveniently located for the student populations they serve.**

Schools serve as an important part of a residential neighborhood. Schools should be located in areas convenient to the student population in a manner that minimizes busing and promotes student, parent and community access to the school.

State regulations identify school bus eligibility based on a walking radius of students to their school:

- Elementary School children should not walk more than 1 mile to school;
- Middle Schools a 1.5 mile radius;
- High Schools within a two mile radius.

Past these distances, students are eligible for bus transportation. Most students within SFPS travel no more than 15-20 minutes on the bus.




Students living greater than these distances are eligible for bus transportation.

**Schools should be located conveniently for the populations they serve.**

Policy issues that govern the establishment of a school attendance area include:

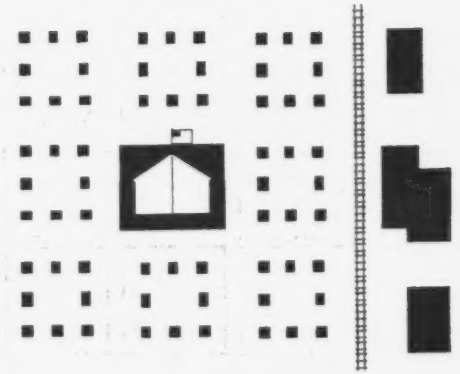
1. The instructionally effective use of each school's physical capacity.
2. The geographic location of each school in relationship to the surrounding student population.
3. The optimization of safe walking patterns consistent with school district transportation policy. Where possible, major thoroughfares and natural barriers will be used as boundaries.
4. The preservation of neighborhood integrity.
5. The equivalence of educational experiences and programs available to the students at the schools involved.
6. The establishment of boundaries for individual schools and high school articulation areas with the objective of achieving the pure feeder concept.
7. Within the school size guidelines of the district, the promotion of excellence in the quality of the educational experience, instructional programs, and other services available to the students at the schools involved.

***Standard 1.1.1 Site Location***
*Site should be central to and easily accessible to the present and/or future population.*

***Policy 1.2 Surrounding Environment***
**The environment surrounding school facilities should be compatible with education needs and development.**

Generally, elementary schools should be located in predominantly residential settings (areas zoned residential under the City of Santa Fe Zoning Code or comparable) and should be a compatible use with the surrounding area. The area should be free of undesirable characteristics such as excessive noise, pollution and dust.

***Standard 1.2.1 Surrounding Environment***
*Location should be removed from undesirable business, industry and traffic.*



**Schools located in residential settings**

***Policy 1.3 Size of Site***

**School sites should be large enough to accommodate present and anticipated programs and the population served.**

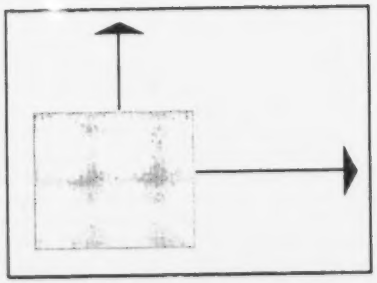
There is no hard and fast rule that dictates the correct size for any school site. Required site sizes can vary according to:

- Urban vs. rural location
- Proximity of recreational and cultural facilities
- Character of the site (amount of the site that can be used)
- Nature of specialized programs.

Each site should provide capability to accommodate adopted SFPS enrollment ranges by either addition of portables, permanent additions or purchase of adjacent land without interference with essential programs (e.g. on-site playgrounds or athletic fields). SFPS school size ranges are:

| | |
|---|---|
| Elementary Schools | 150 to 550 students |
| Middle Schools | 500 to 600 students |
| High Schools | 1000 to 2100 students |

In general, the larger the site, the more inherent flexibility there is to respond to future requirements. Larger sites, however, entail increased maintenance expense. Based on a review of existing SFPS school sites and commonly accepted national standards, the following standards for minimum sizes (net acres, e.g. not including unusable area due to excessive slopes, drainage etc.) for each level are:



**School sites are sized to accommodate present and anticipated programs**

| | Net Acres | | |
|---|---|---|---|
| | Low | Ideal | High |
| Elementary Schools | 7.5 | 10 | 15 |
| Middle Schools | 15 | 20 | 30 |
| High Schools | 30 | 40 | 50 |

Where schools are located adjacent to a joint school-park site, the size of the joint site should be counted toward the total acreage of the school site.

***Standard 1.3.1 Elementary School Site Size***
*Site should be of adequate size for school level and specialized program needs.*

***Standard 1.3.2 Expansion Options***
*Campus should allow options for on-site expansion of facilities.*

Factors to evaluate the capacity to expand:

- Size of site
- Infrastructure (water, sewer, gas, electricity) to serve portables or new structures.
- Ability to accommodate a minimum of 8 portables without disrupting essential site functions
- Relationship to other site activities.

| Site Requirements | # | Area (S.F.) | Acres |
|---|---|---|---|
| Permanent Buildings* | | | 1.27 |
| Portable Buildings | 8 | 840 | 0.15 |
| Visitor/Staff Parking | 85 | 350 | 0.68 |
| Bus Pick-up/Drop Off | 1 | | 0.69 |
| Play Areas | | | |
| Kindergarten | | | 0.19 |
| Asphalt Play Area | | | 0.58 |
| Grassed Field (1- 180' x 320') | | | 1.32 |
| Concrete Pad (2- 40' x 60') | | | 0.11 |
| Softball Fields | | | 0.74 |
| | | Net | 5.75 |
| | | Tare** at 30% | 2.46 |
| | | Total Minimum Site | 8.21 |

* Assuming one story construction
** Roadways, landscaping, walks

*Size required for a typical new elementary School with 600 student enrollment.*

**Size of Sites of Selected SFPS Elementary Schools:**

| | |
|---|---|
| Carlos Gilbert | 2.83 acres |
| El Dorado | 16.00 acres |
| Gonzales | 10.00 acres |
| Piñon | 20.00 acres |
| Salazar | 7.50 acres |
| Turquoise Trail | 24.265 acres |

***Policy 1.4 Site Accessibility***
**Elementary schools should be safely accessible by pedestrians and vehicles.**

**Sub-Policy 1.4.1 Off-Site Student Pedestrian Access**
**There should be clear and safe pedestrian access to a school in accordance with State and SFPS policy.**

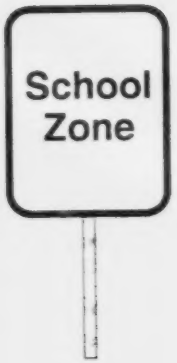
All major streets exceeding 55 vehicles/minute or 70 vehicles/minute within 1 mile distance from elementary schools should have either:

- A pedestrian crossing area with crossing guard and standardized signage (provided by City and County Police)
- Appropriate traffic signals (provided by City and County Police); or
- Provision for student bus transportation.

SFPS works closely with the City Police Department, County Sheriff's Department and City and County Transportation Planners to identify and eliminate any hazardous walking conditions.

***Standard 1.4.1.a Access Streets***
*Access streets should have sufficient signals and signs to permit safe pedestrian entrance to and exits from the school area.*

***Standard 1.4.1.b Off-site Sidewalks***
*Off-site sidewalks should be available for safety of pedestrians.*




***Notes:***
*See Appendix C for a list of specific State Statutes applicable to barrier free access.*

***Sub-Policy 1.4.2 On-Site Pedestrian Access***

**There should be paved sidewalks connecting all school activity areas (to avoid undue maintenance in interior areas).**

***Standard 1.4.2.a On-Site Sidewalks***

*The school site should provide adequate and accessible on-site sidewalks between school areas.*

***Standard 1.4.2.b Handicapped Accessibility***

*Handicapped access facilities such as ramps, handrails, and curb cuts should be available at building entrances, parking areas, playgrounds and pedestrian walks in accordance with the Americans with Disabilities Act, American National Standards Institute (ANSI), Specifications for making buildings and Facilities Accessible to and Usable by Physically Handicapped People with the objective of achieving program accessibility.*

***Standard 1.4.2.c. Main Entry***

*The main entrance to buildings or building complexes should be clearly defined through the use of building design, landscaping, signage or other method and communicate a positive image of the school.*

***Note**:*
*A draft Handicapped Accessibility checklist is provided in Appendix C.*

***Sub-Policy 1.4.3 Vehicular Access***

**There should be clear, separate, distinct and safe on-site circulation paths for: pedestrians, buses, staff, visitor and service vehicles.**

***Standard 1.4.3.a Bus Loading/Unloading***

*There should be separate bus loading/unloading zones on the school site accommodating the required number of buses for that school that does not conflict with other vehicular or pedestrian pathways and provides for the safe loading and unloading of students.*

***Standard 1.4.3.b Student Drop-Off/Pick-up***

*There should be a separate area for the drop-off and pick-up of students by parents on the school site that does not conflict with other vehicular or pedestrian pathways and provides for the safe loading and unloading of students.*

***Standard 1.4.3.c Kindergarten Drop-Off/Pick-up***

*There should be a separate, safe and convenient drop-off and pick-up area for kindergarten students on the school site.*

***Standard 1.4.3.d Vehicular Entrances/Exits***

*Vehicular entrances and exits should be safe for traffic flow.*

***Standard 1.4.3.e Service/Emergency Access***

*There should be appropriate access to all areas of the site by service and emergency vehicles properly identified.*

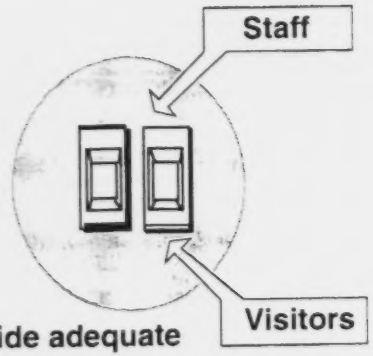
**Separate Vehicular and Pedestrian Circulation**

***Standard 1.4.3.fStreet/Parking Area Condition***
*Streets and parking areas should be well designed with solid surfaces.*

***Standard 1.4.3.g Portable Buildings***
*There should be sufficient room for ingress and egress of portable buildings to the site.*

***Sub-Policy 1.4.4 Parking***
**There should be adequate parking for staff and visitors at all SFPS schools. Parking areas should be paved and separate from other access ways.**

Parking standards are:
- One space for each teacher and staff member (for maximum planned enrollment levels).
- Ten spaces for visitors conveniently located near the school office.
- 4% of parking spaces should be handicapped designated and dispersed in staff and visitor lots.
- There should be 1,000 sf of pad and enclosure for bicycle storage that can be easily supervised (e.g. near administrative offices).



**Provide adequate parking**

In a typical 600 student elementary school there should be about 85 spaces (Staff Parking - 75 spaces, Visitors - 10 spaces) although some schools may require more or less depending upon location.

***Standard 1.4.4.a Parking***
*There should be adequate staff and visitor parking on the site. Parking areas should be paved and separate from other access ways.*

***Standard 1.4.4.b Special Event Parking***

*There should be ability to accommodate visitor parking for special events (on-site and off-site) without creating nuisance or safety hazards to the surrounding neighborhood.*

***Policy 1.5 Site Development***

**School sites should be developed to enhance the educational environment and the image of the school to the surrounding community.**

Elements of site development include the harmonious blend of

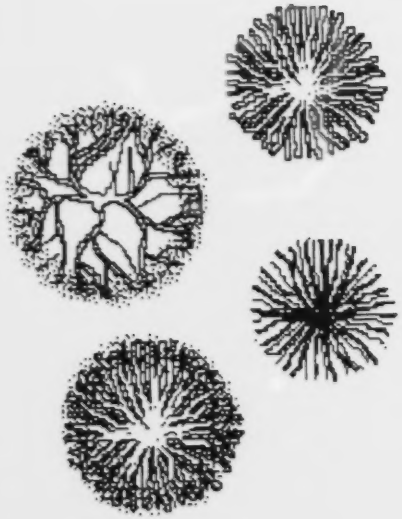
- Landscaping (plant material)
- Planting areas
- Pedestrian areas

for the school site, perimeters, parking lots and adjacent streets. The aesthetic appeal and subsequent maintenance are important concerns.

***Standard 1.5.1 Plant Material***

*Plant material should provide shade, visual screening, wind protection and aesthetic qualities for the building and surrounding area. From 7% to 15% of the school site should be landscaped with trees or grass (not including a grassed playing field) using low maintenance plant material. The following areas should be landscaped:*

- *Parking lots*
- *Perimeters of the school facing public right-of-ways*
- *Public areas*
- *Outside learning areas.*



***Issue:***

*Landscape issues include:*

- *Ease of maintenance*
- *Types and placement of plantings*
- *Amount of site to be landscaped*
- *Specific guidance re:*
  - *Parking lot landscaping*
  - *Entrance landscaping*
  - *Playing fields*
- *Irrigation systems*
- *Storage for exterior maintenance*
- *Adequacy and condition*

***Standard 1.5.2*** ***Walkways/Gathering Areas***
*High pedestrian traffic areas should have paved surfaces.*

***Standard 1.5.3*** ***Student Seating***
*There should be seating areas available in high pedestrian areas.*

***Standard 1.5.4*** ***Irrigation Systems***
*The site should have a low maintenance irrigation system with vandal-proof sprinkler heads that cover all play fields, lawns, and planting areas.*

***Standard 1.5.5*** ***Developed Area***
*The school site should be developed as much as practical with building area, landscaping, parking, hard-surfaced play areas and pedestrian ways with the intent of minimizing vacant, dirt areas.*

***Note:***
*Walkway slopes should not exceed 1:20 and cross slope should not exceed 1:50.*

***Policy 1.6*** ***Drainage:***
**The site should be graded to insure good drainage and yet avoid soil erosion. Drainage should be directed away from the buildings and avoid student traffic and congregation areas.**

***Standard 1.6.1*** ***Drainage***
*School sites should be well-drained and free from erosion.*

Drainage considerations are:
- Water should not discharge over sidewalks except by sheet flow.
- Drainage should be removed by adequate catch basins and drainpipes.

- Roof drainage should be directed away from the building.
- Recreation and play areas should be properly drained.
- Drainage into public rights-of-way should be avoided.

***Policy 1.7 Site Recreation***

**The school site should provide outdoor recreation and learning areas suitable for age of student population served.**

***Standard 1.7.1 Playground Location***

*Playgrounds should be conveniently located for student population and removed from streets and parking areas.*

***Standard 1.7.2 Playground Equipment***

*Playgrounds should be well equipped to serve all students: .*

Playgrounds should reflect both the needs of primary (1 to 3) and intermediate (4 and 5) grades.

Other items to consider:
- Walls designed to throw balls against
- Soft, sand areas
- Play structures

***Standard 1.7.3 Kindergarten Playground***

*There should be a fenced kindergarten area with appropriate equipment scaled to kindergartner use including:*

- A climber
- Play structures

*At a prototypical APS elementary school, required equipment at playgrounds include:*
- *Chinning Bars (1 per 200 students)*
- *2 mountain climbers*
- *3 rainbow climbers and/or horizontal climbers*
- *5 swing sets (6 swings each)*
- *4 softball backstops*

*Development of SFPS standards and assessment of existing playgrounds is scheduled to take place in the summer of 1994.*

- Tables and sitting areas
- Hard and soft surfaces
- Water availability

**Standard *1.7.4 Playground Safety***
*The playground equipment should be located and designed to minimize hazards.*

*Factors to consider include:*

- *Proper spacing between equipment*
- *Cushioned 'soft' ground surfaces beneath the equipment*
- *Metal or plastic rather than wood play structures to minimize hazards of splinters and minimize maintenance*
- *Designs that are free of obstacles.*

***Standard 1.7.5 Hard Surfaced Play Areas***
*There should be hard surfaced play areas located near the building with southern sun exposure. Areas should include:*

*At a prototypical APS elementary school, hard surfaced play areas include:*
- *1 concrete pad (60' x 80') or 2 pads (each 40' x 60') with 12 basketball goals (6 around each pad)*
- *Asphalt play area (25,000 sf, or about 160' x 160') with painted game lines.*

***Standard 1.7.6 Grass Playing Field***
*There should be one grassed game field not to exceed 180' x 320' with a 8'-10' running track around the perimeter located near the playgrounds.*

***Standard 1.7.6 Playground Supervision***
*Playgrounds should be organized to minimize the number of supervisory personnel required.*

***Policy 1.8 Safety/Security***

**The site should be a safe and secure environment for student population served.** The school site should be free from on-site and off-site hazards.

***Standard 1.8.1 Safety/Security Hazards***

*Site should be free of safety or security hazards (e.g. ice on sidewalks, excessive slope, dangerous play equipment, improperly designed stairs).*

***Standard 1.8.2 Electric Service***

*Electric service should be underground.*

***Note:***

*Older schools may not meet this standard (electric service underground).*

***Standard 1.8.3 Fencing***

*Safety security fences should be provided to protect students from hazard of traffic, railroad, steep terraces; to protect adjacent properties from trespass by students and to discourage passersby from walking onto the campus. There should be pedestrian access at convenient locations.*

***Standard 1.8.4 Security Lighting***

*Sites should have illuminated parking areas, walks, entrances, and exterior building areas for both safety and security purposes activated by a timer controlled by the principal.*

***Standard 1.8.5 Drain Fields***

*Septic tanks and drainage fields should be located away from sand/digging play areas where possible.*

***Policy 1.9 Maintenance***

**School site should be able to be maintained by SFPS maintenance personnel.**

***Standard 1.9.1 Electrical Equipment***

*Outdoor light fixtures, electric outlets, equipment and other fixtures should be accessible for repair and replacement.*

***Standard 1.9.2 Water***

*Outside water supply should be adequate for normal usage.*

***Standard 1.9.3 Landscaping***

*Site landscaping should be reasonably maintained and is water conservative.*

***Standard 1.9.4 Gas Lines***

*Site gas piping should be accessible for repair.*

***Standard 1.9.5 Garbage Collection***

*Each school should have a designated garbage collection area meeting the City of Santa Fe standards, located near the kitchen and accessible to a service access.*

## 2.0 School Plant Assessment

This section establishes policies and minimum standards for adequacy and condition of:

- Exterior and Interior Building Components
- Heating/Ventilation/Air Conditioning
- Electrical/Telecommunications
- Safety/Security
- School Plant Maintainability

Assessment of condition is a matter for the most part of age and maintenance. Adequacy of many of these areas is largely governed by state and local building codes that set minimum standards with the intent of protecting occupant health and safety.

Applicable codes include:

- Uniform Building Code (Accessibility and Exits)
- NFPA101 Code for Safety to Life from Fire in Buildings and Structures (Exits, Fire Protection equipment)
- Uniform Plumbing Code (numbers and location of rest rooms and fixtures, drinking fountains).
- Uniform Mechanical Code
- Americans with Disabilities Act, specifications for making buildings and facilities accessible to and usable by physically handicapped people (handicapped accessibility)
- American National Standards Institute (ANSI), Specifications for making buildings and Facilities Accessible to and Usable by Physically Handicapped People
- Uniform Code for Building Conservation (Energy Conservation)
- New Mexico Building Code

School facilities are required to meet the codes adopted by the local government during plan review prior to construction. There have been numerous changes in state and local code requirements since many SFPS schools have been constructed. Although an existing school is not required to comply with each new code modification, it is good planning policy to strive to meet new standards when possible during normal plant maintenance and certainly during any facility renovation and new construction. The intent of the facility evaluation is not to conduct a formal code search, but to indicate potential problem areas to be addressed in more detailed studies.

**Note:**

*Condition of building components is largely determined by age and maintenance. Evaluators will take this into account by assigning points based on the weighted average age of the original building and all additions or last extensive remodeling program.*

***Policy 2.1 Health/Safety***

**Site and Facilities should provide a safe and healthy environment for learning in accordance with appropriate codes and ordinances.**

***Sub-Policy 2.1.1 Structural Building Components***

**The structural condition of the school should provide a safe and sound educational environment that permits reasonable opportunity for internal flexibility and adaptability to meet new circumstances.**

*Indicators of structural problems:*

- *Do any outside walls show signs of cracking?*
- *Are foundations strong and stable?*
- *Are there any areas with unusual floor problems (e.g., cracking, uneven surface)?*
- *Are there any doors in the facility that have persistent closing/opening problems.*

***Standard 2.1.1.a Foundations***

*Foundations and basement walls should be free of structural cracks, water damage or defective mortar. There should not be signs of shifting or settling.*

***Standard 2.1.1.b Floors***

*Floors should be level, rigid and free of decay and be of adequate strength to support structural loads imposed.*

***Standard 2.1.1.c Walls***

*Walls should be plumb, with junctures aligned and free of structural cracks, water damage and loose or defective mortar. Walls should be impervious to moisture, seepage and show no signs of deterioration.*

***Standard 2.1.1.d Structural System Flexibility***

*Structural system should permit flexibility to adjust to program requirements.*

*Standard 2.1.1.d may be hard to satsify in older schools.*

***Standard 2.1.1.e Sound Transmission***
*Wall and ceiling design should retard transmission of unwanted sound.*

***Standard 2.1.1.f Roofs***
*Roofs should be structurally sound, have positive drainage and be weather tight.*

***Sub-Policy 2.1.2 Interior Building Components***
**The interior building components of the school should provide a safe and sound educational environment.**

***Standard 2.1.2.a Walls***
*Interior walls and partitions should be:*
- *Sound absorbent*
- *Clean without breaks, cracks or holes.*

***Standard 2.1.2.b Floors***
*Interior floors:*
- *Surfaces should be non-skid, attractive in appearance, easy to maintain and free from projections.*
- *Carpet, tile, concrete and other floor finishes should be clean, in good condition and without worn, broken or frayed areas.*

***Standard 2.1.2.c Ceilings***

- *Ceiling heights should range from 8 feet to 14 feet for economy of heating, air conditioning, illumination and ventilation.*
- *Ceiling surfaces should be clean and without holes, cracks and missing or broken, yellowed tile.*
- *Ceiling design should minimize noise.*

***Sub-Policy 2.1.3. Energy Conservation***

*School facility should be energy conservative.*

***Standard 2.1.3.a Energy Conservation***

*Facility should meet energy conservation standards:*

*Factors to consider include:*

- *Adequacy and condition of caulking and weatherstripping around all windows, doors, conduits, piping, exterior joints and other areas of infiltration.*
- *Adequacy and condition of insulation in walls and roof.*
- *All exterior main ingress/egress doors are equipped with properly designed vestibules (excluding emergency only exits and exits from individual classrooms).*
- *Solar heat gain through windows.*
- *Heat loss through windows.*

***Sub-Policy 2.1.4 Mechanical System (Heating/Cooling/Ventilation)***
**Mechanical Systems should provide for a reliable year-round comfortable environment in a cost efficient manner in conformance to local health and safety codes.**

***Standard 2.1.4.a School-Year Comfort***
*There should be provision for school-year comfortable temperature throughout the building (70 degrees in winter and 78 degrees in summer).*

***Standard 2.1.4.b Ventilation***
*Ventilating system should provide adequate year-round circulation of fresh air.*

***Standard 2.1.4.c Mechanical System Reliability***
*Mechanical systems should be reliable and should not require frequent repair.*

***Standard 2.1.4.d Mechanical System Noise***
*Mechanical systems should run quietly and not have obtrusive noises.*

***Standard 2.1.4.e Heating Unit Location***
*The central heating plant unit(s) should be located away from student occupied areas in accordance with local building codes.*

***Standard 2.1.4.f Mechanical System Accessibility***
*Mechanical equipment should be easily accessible for normal maintenance.*

***Sub-Policy 2.1.5 Plumbing***

**Plumbing Systems and fixtures should reliably supply water and meet wastewater requirements for the population served in a cost efficient manner and in conformance with local health and safety codes.**

***Standard 2.1.5.a Rest Room Fixtures***

*Number and size of rest rooms and fixtures should meet or exceed code requirements.*

The number of fixtures should conform to the following minimum standards (Uniform Plumbing Code):

| **Fixture** | **Standard** | |
|---|---|---|
| Schools - Elementary | | |
| | Male* | Female |
| Water Closets | 1:30 | 1:25 |
| Urinals | 1:75 | - |
| Lavatories | 1:35 | 1:35 |
| Drinking Fountains | 1:75 | 1:75 |
| Schools - Staff Use | | |
| | Male | Female |
| Water Closets | 1:1-15 | 1:1-15 |
| | 2:16-35 | 2:16-35 |
| | 3:36-55 | 3:36-55 |
| Urinals | 1:50 | - |
| Lavatories | 1:40 | 1:40 |

**Note**

*Typical Number of Required Fixtures for a Range of Elementary School Sizes (Uniform Plumbing Code)*

| # of Students | 375 | | 600 | | 750 | |
|---|---|---|---|---|---|---|
| | M | F | M | F | M | F |
| **Elementary School** | | | | | | |
| Water Closets | 7 | 8 | 10 | 12 | 13 | 15 |
| Urinals | 3 | - | 4 | - | 5 | - |
| Lavatories | 6 | 6 | 9 | 9 | 10 | 10 |
| Drinking Fountains | 3 | 3 | 4 | 4 | 5 | 5 |
| # of Staff | 70 | | 80 | | 85 | |
| | M | F | M | F | M | F |
| **Staff** | | | | | | |
| Water Closets | 2 | 2 | 3 | 3 | 3 | 3 |
| Urinals | 1 | - | 1 | - | 1 | - |
| Lavatories | 1 | 1 | 1 | 1 | 2 | 2 |

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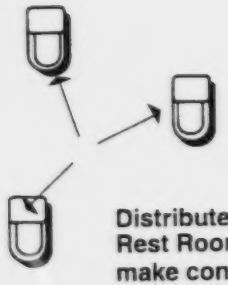
* Whenever urinals are provided, one (1) less than the number specified may be provided for each urinal installed, except the number of water closets in such cases shall not be reduced to less than two thirds (2/3) of the minimum specified.

  Each separate restroom for staff and students should have at least one accessible fixture of each type provided.

***Standard 2.1.5.b Distribution of Rest Rooms***
*Rest rooms should be properly distributed for staff and student populations including rest room access from:*

- *Permanent building*
- *Portable buildings*
- *Outside play areas*



**Distribute Rest Rooms to make convenient to students and staff.**

***Standard 2.1.5.c Drinking Fountains***
*There should be an adequate number of drinking fountains and they should be appropriately placed with access available for the handicapped.*

Drinking fountains should be furnished at no less than 1 per 75 students. Location of fountains should be at central and convenient points on each floor, or wing of the school, near portables and in the playground areas (vandal proof).

***Standard 2.1.5.d Plumbing Fixtures***
*Plumbing fixtures (water closets, lavatories, urinals, drinking fountains) should be in good repair and condition. There should be privacy stalls for male and female water closets.*

***Standard 2.1.5.e Water Supply***
*Internal building water supply should be adequate, with sufficient pressure and treated to meet health and safety needs.*

***Standard 2.1.5.f Waste Water System***
*Waste water (sewer) systems should be properly maintained and meet or exceed code requirements.*

***Standard 2.1.5.g Plumbing System Reliability***
*Plumbing systems should be reliable and not require frequent repair.*

***Standard 2.1.5.g Plumbing System Maintenance***
*Cut-off valves should be accessible for normal maintenance.*

***Sub-Policy 2.1.6*** ***Electrical/Emergency/ Telecommunications***

**There should be adequate Electrical/Emergency/ Telecommunications services to permit effective and safe program instruction in accordance with proper codes.**

***Standard 2.1.6.a Electrical Service***

*Electrical service should be adequate for existing and projected load.*

***Standard 2.1.6.b Electrical Outlets***

*Each learning/teaching area should have two duplex outlets per wall.*

***Standard 2.1.6.c Lighting***

*Well maintained light sources, properly placed, should provide adequate lighting.*

*(See following recommended illumination levels).*

***Standard 2.1.6.d Emergency Alarm Systems***

*Emergency systems should be properly maintained and meet or exceed code requirements including:*

- An automatic and manual fire alarm system with a distinctive sound and a flashing light.
- Fire alarm horns located to provide sound coverage throughout the building.
- Alarm pull stations located at points of egress.
- Properly functioning and located smoke detectors as required.

***Note***

- *Ask teachers and custodians if they have problems in their classrooms with power outages. With all lights and equipment powered, test the breaker boxes for excess heat.*
- *To determine the adequate load to support additional portables one must compare the maximum KVA usage at site to the size of the transformer.*

***Note:***

*The quality of light is an important consideration to provide a healthy learning environment. Both general illumination and task lighting requirements vary according to activity. In general, as much natural light as possible is recommended augmented by light sources replicating the natural spectrum. See also 3.5.6.*

## Recommended Ilumination Levels

Source: Guide for Facility Appraisal

The following guidelines are recommended illumination levels (foot candles/square foot) provided by the Illumination Engineering Society and the "practiced" levels based on actual use in New York City Schools:

| | Foot Candles/Square Foot | |
|---|---|---|
| | **Recommended** | **Practiced** |
| **Libraries** | | |
| Reading rooms and carrels | 70 | 30 |
| Stacks | 30 | 30 |
| Book repair and bindings | 70 | - |
| Check in and out, catalogs, card files | 50 | 30 |
| **Offices** | | |
| Designing, detailed drafting | 110 | 50 |
| Accounting, bookkeeping, and business | 85 | 30 |
| Regular Office work | 70 | 30 |
| Corridors and stairways | 20 | 15 |
| Washroom | 20 | 15 |
| **Classroom Space** | | |
| Regular classroom work | 50 | 30 |
| Chalk boards | 100 | 50 |
| Drafting rooms | 100 | 50 |
| **Auditoriums** | | |
| Assembly | 20 | 15 |
| Study hall | 50 | 30 |
| **Laboratories** | | |
| General Work | 50 | 30 |
| Close work | 100 | 50 |
| **Lecture Rooms** | | |
| General | 50 | 30 |
| Special/Demonstration/exhibit | 100 | 50 |
| **Exterior** | | |
| Parking areas | 5 | 5 |
| Roadways | 5 | 5 |

***Standard 2.1.6.e Security System***

*Security systems should be adequate and functioning, reflecting the individual needs of each school.*

***Standard 2.1.6.f Special Systems***

*The nature and type of special systems are school-based decisions. The following are potential systems to be considered:*

- *Intercom System*
  - *Intercom system should be adequate and functioning with provision for voice calling to individual loud speakers and two-way voice communications with loudspeakers located in all offices, learning and support areas.*
  - *All call answering should be provided from the console to all speakers by means of a single operating control.*
- *Clock System. Clocks should be located in the following areas:*
  - *Office area*
  - *All teaching areas*
  - *Cafeteria*
  - *Teacher's lounge*
- *Closed Circuit TV. Each school should have cable TV hookups and all teaching stations should have conduits for closed circuit television to allow for central distribution from the media center.*

***Standard 2.1.6.g Telephones***

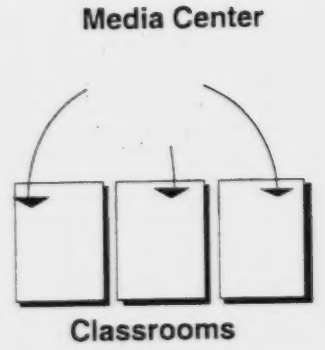
*An adequate and functioning two to three line key telephone system should be provided with phones provided in the following areas:*

- *Principal's Office*
- *Secretary area*
- *Nurse's area*
- *Counselor's office (if available)*
- *Teachers' Lounge (optional)*
- *Cafeteria*

*In lieu of an intercom with call-back, telephones may be provided in each classroom.*

***Standard 2.1.6.h Computers***

- *External: Every school should have a dedicated data (phone line) link to the central SFPS computer.*
- *Internal: Every classroom and office area should have conduit with a conveniently located computer port that can eventually be connected to a central computer file server.*

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***Policy 2.2*** ***Accessibility/Safety***

**School facilities should be program accessible to all populations in normal and emergency situations.**

***Standard 2.2.1*** ***Exterior Doors***

*Exterior doors should open outward and be equipped with panic hardware.*

***Standard 2.2.2*** ***Classroom Doors***

*Classroom doors should be recessed, open outward and have smoke seals as required.*

***Standard 2.2.3*** ***Exit Corridors - Projections***

*Fixed projections in the traffic areas should not extend more than 8 inches from the corridor wall.*

***Standard 2.2.4*** ***Exit Corridors - Termination***

*Corridors should terminate at an exit or a stairway leading to an egress.*

***Standard 2.2.5*** ***Exit Lights***

*Exits should be clearly marked with lighted exit signs that remain lighted during power outages.*

***Standard 2.2.6*** ***Emergency Exits***

*There should be at least two independent exits to safety from any circulation point in the building.*

***Standard 2.2.7*** ***Stairways***

*Stairways and/or exits should be of fire-resistant material.*

**Basic Categories for Barrier-Free Evaluation:**
(Guide to Facility Evaluation)

- **Site Considerations**
  - Parking Spaces
  - Curb Cuts
  - Sidewalks
  - Running and cross slopes
  - Signage
- **Doors**
  - Width and clearance
  - Opening Pressure
  - Threshold
- **Floors and Halls**
  - Width
  - Surface Covering
  - Obstructions and Hazards
- **Operating Mechanisms and Controls**
  - Height
  - Ease of Manipulation
- **Water Fountains**
  - Height
  - Controls
- **Changes in Levels**
  - Ramps
  - Elevators
  - Lifts
  - Handrailes
- **Rest Rooms**
  - Location
  - Size
  - Stall Width and Depth
  - Grab Bars and Accessories
- **Seating**
  - Space for Wheelchairs
  - Traffic Circulation
- **Telephones**
  - Height
  - Volume Control

***Standard 2.2.8 Glass***

*Glass should be properly located and protected to prevent accidental student contact. Safety glass or wire glass is used where required by code.*

***Standard 2.2.9 Barrier-Free***

*Structure should meet or exceed all barrier free requirements to the degree practical, both externally and internally in accordance with the Americans with Disabilities Act and American National Standards Institute (ANSI), Specifications for making buildings and Facilities Accessible to and Usable by Physically Handicapped People with the objective of achieving program accessibility.*

***Note:***
*Please refer to the Handicapped Accessibility checklist contained in Appendix C.*

***Policy 2.3 Cost-Effective Maintenance***

**Site and grounds should be designed for cost effective operation and ease of maintenance by SFPS maintenance personnel.**

***Standard 2.3.1 Windows, Doors, Walls***

*Windows, doors and walls should be of material and finish requiring minimum maintenance.*

***Standard 2.3.2 Floor Coverings***

*Classroom floor covering(s) should require a minimum of care.*

***Standard 2.3.3 Ceilings***

*Ceilings and walls should require minimum care.*

***Standard 2.3.4 Built-in Equipment***

*Built-in equipment should be designed and constructed for ease of maintenance and durability.*



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***Standard 2.3.5 Floors in Special Areas***
*Floors in rest rooms, kitchens, cafeterias and corridors should require a minimum of daily maintenance.*

***Standard 2.3.6 Rest Room Fixtures***
*Rest room fixtures should be wall mounted and of quality finish.*

***Standard 2.3.7 Custodial Areas***
*Adequate custodial storage spaces with water and mop sink should be in proximity to all areas.*

***Standard 2.3.8 Electrical Availability for Maintenance***
*Adequate electric outlets that are properly protected from young children and power should be available in every area to permit routine cleaning.*

## 3.0 Adequacy and Environment for Education

The policies and standards in this section assess the adequacy of the school structures to support educational and curriculum requirements while providing an environment conducive for learning.

The adequacy of the school areas can be quantitatively measured by examining the types, areas and relationships between other functions of the spaces provided. The "ideal" that serves as the basis for measurement results from lessons learned and practical experience of designing and constructing schools over the years. It is an evolutionary rather than revolutionary process. Periodic review and analysis of these policies and standards is to be anticipated and encouraged.

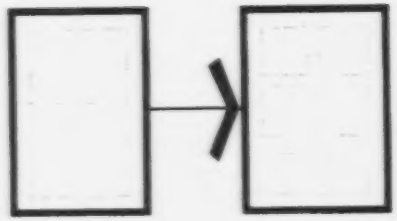
The environment for education is an assessment of the qualitative factors that make a school a pleasant place to learn.

***Policy 3.1 Plan for Flexibility***

**School facilities should provide ability to adjust to programmatic (instructional and community) and technological change.**

School facilities must provide a learning environment supportive of the District's educational programs and curricula. While it may be impossible to predict with certainty the types of programs and technological changes that may occur in the future, it is a realistic goal to build into our facilities opportunity to adjust to many demands including:

- Internal flexibility
- Ability to expand and contract
- Ability to accommodate future technology.



Provide Flexibility To Meet New Circumstances

***Standard 3.1.1 Flexibility of Classrooms***

*Educational areas should allow internal flexibility for program adaptations: Factors to consider include:*

- *Classrooms are sized to allow a variety of grade levels.*
- *Classrooms and support areas are designed to allow different programs to occur.*
- *Classrooms can be varied in size through use of demountable partitions.*
  - *1/2 size classrooms that can be made into full classrooms;*
  - *Full classrooms that can be made into double size (for team teaching)*
  - *Appropriate plumbing stub-outs*
- *Classrooms that allow the positive use of walls and ceilings*
- *Flexibility in furniture arrangement.*

***Standard 3.1.2 Ability to Add Permanent or Portable Classrooms***

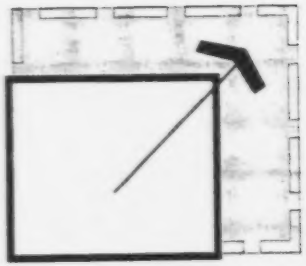
*Every elementary school should have the ability to serve its enrollment capacity by the addition of permanent or portable classrooms.*

***Standard 3.1.3 Expansion Capability of Core Support Facilities***

*Support facilities (e.g. cafeterias, rest rooms, media center) should have the inherent capability to support anticipated expansion of the school population or have infrastructure potential for unexpected enrollment.*

***Standard 3.1.4 Communication and Information Technologies***

*Learning and office spaces should have the capability to accommodate communication and information technologies.*



**Plan for Expansion of Facilities**

***Note:***
*At new APS schools, core facilities are sized to support a maximum of 600 students. This is based on a cafeteria limitation of 200 students per period with a maximum number of 3 lunch periods.*

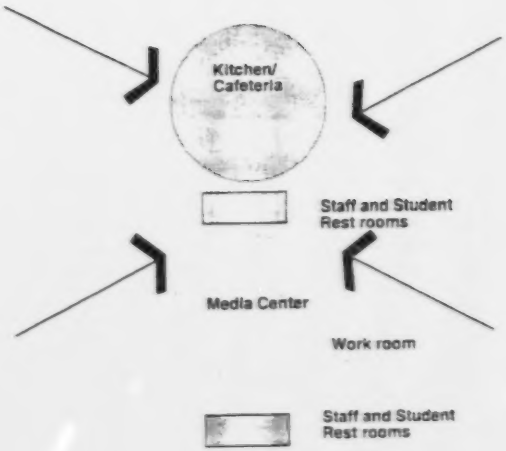
***Policy 3.2*** ***Site/Facility Organization***

**School sites and facilities should be organized in a clear and consistent manner that is conducive to learning and allows proper supervision** (see exhibits on following pages).

***Standard 3.2.1*** ***Centralization of Common Use Facilities***

*Common use facilities should be centralized to population served:*

- Media Center
- Work Room
- Cafeteria
- Student Rest Rooms
- Staff Rest Rooms




**Centralize key support activities**

***Standard 3.2.2*** ***Noisy-Quiet Separation***

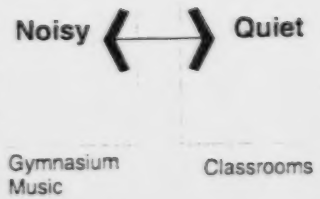
*"Noisy" activities (gymnasium, music, assembly areas) are separated from learning areas.*

***Standard 3.2.3*** ***Kindergarten Pick-up/Drop-Off***

*Kindergarten classrooms should be close to parent pick-up/drop-off areas.*

***Standard 3.2.4*** ***Covered Circulation***

*Covered circulation with hard surfaced sidewalks should connect all school activity areas.*




**Separate Noisy Activities from Quiet Activities**

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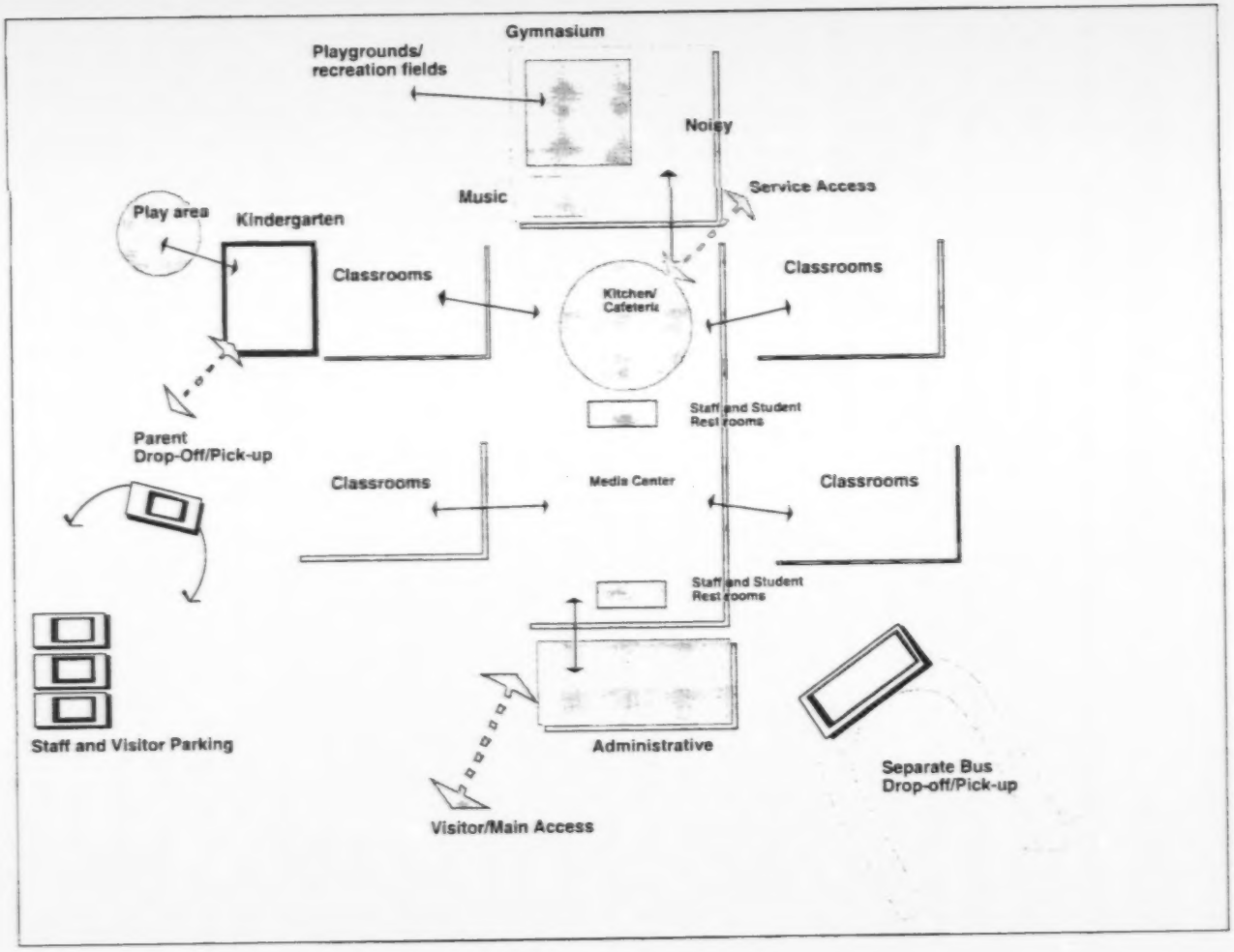


This a schematic relationship diagram of a prototypical elementary school based on the standards described in this document.

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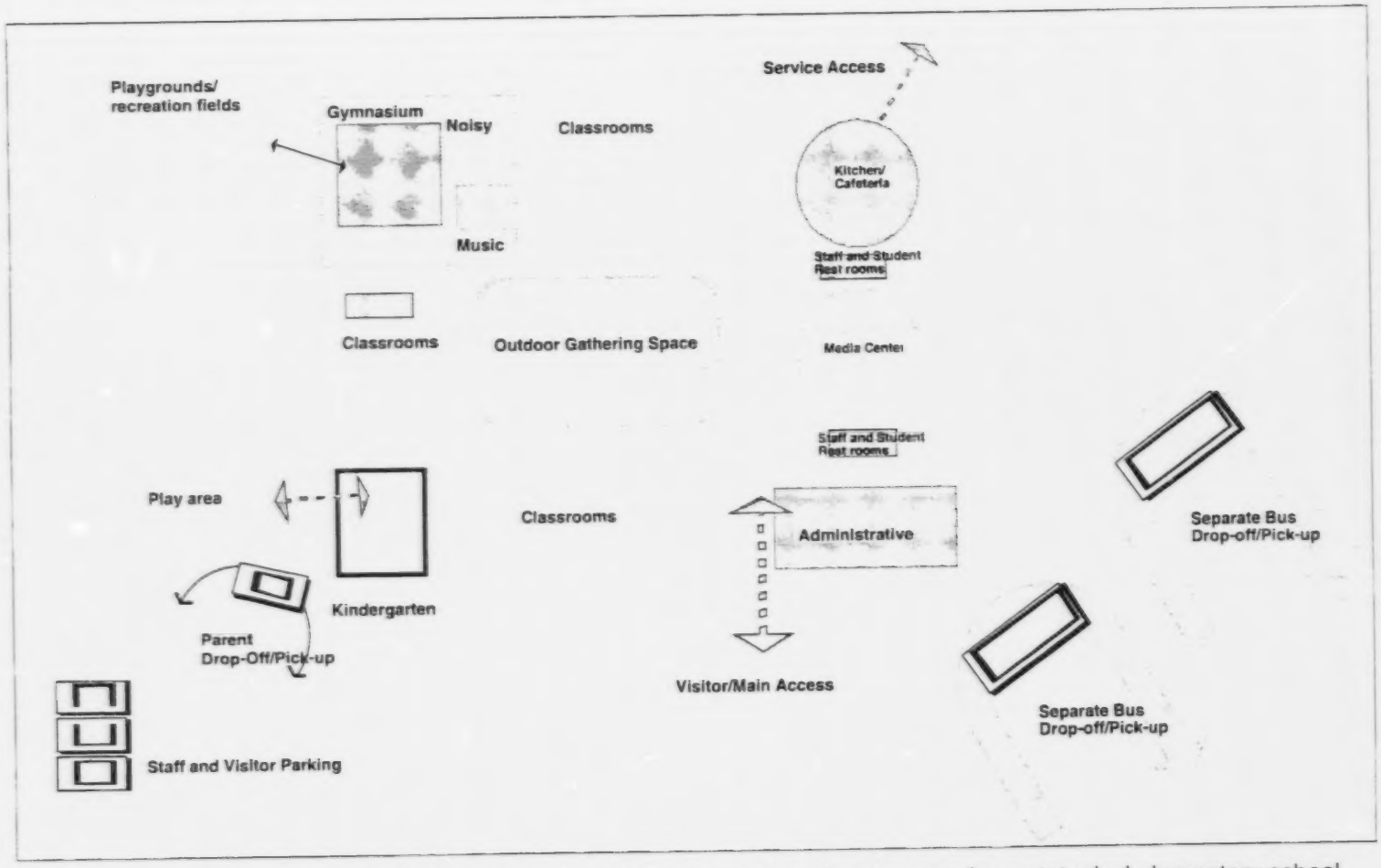


This is an alternate schematic relationship diagram of a prototypical elementary school based on the standards described in this document. This diagram differs from the previous one by grouping classrooms around an outdoor activity area.



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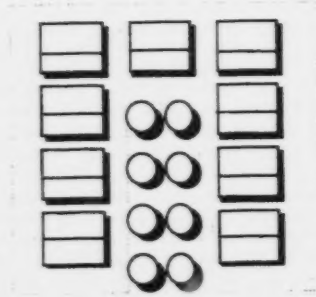
***Standard 3.2.5*** ***Entrance/Exit Location***
*Entrances and exits should be located to permit efficient student traffic flow.*

***Standard 3.2.6*** ***Portable Classroom Location***
*Portable classroom buildings should be integrated with other academic learning areas and have equal access to school support facilities.*

***Standard 3.2.7*** ***Supervision of Large Group Areas***
*Large group areas (cafeteria, media center, outside gathering areas) should be designed for effective supervision.*



**Use Portables In A Positive Way.**

***Note:***

*There are a lot of potential portable discussion issues (e.g. Access, security, condition, room for expansion, total number of portables on-site). In general:*

- *Portable classroom location should be defined prior to the needs.*
- *Measures of more economic installation should be explored.*
- *Integrated open space should be provided.*
- *Infrastructure support should be provided.*

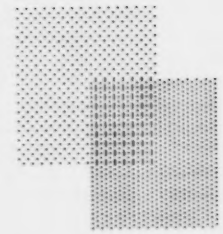
***Policy 3.3 Community/After Hour Use***
**School facilities should provide the opportunity for community and after hour use.**

The public investment in school plants and sites and the general community welfare generally justifies the use of school buildings and grounds by local citizen groups for educational, cultural, civic and recreational purposes outside of school hours or when such use will not conflict with or interfere with the school program.

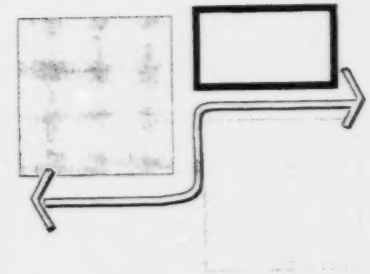
***Standard 3.3.1 Community Education***
*Joint-use space should be safe, secure, and include separately keyed activity spaces (gym, cafeteria, classroom), accessible rest rooms and storage areas.*

***Standard 3.3.2 Joint-Use Facilities***
*Joint-use facilities (parks, swimming pools, libraries, etc.) should be integrated into campus in a safe and secure manner, as appropriate.*

***Standard 3.3.3 After Hour Use***
*The facility should permit use of some portions of the school without impacting security of other portions of the school.*



**Allow for joint and after hour use**



**Zone functions to allow adequate control and supervision**

***Policy 3.4*** ***Spaces Meet Instructional Needs***

**All school areas should provide an environment that meets instructional and functional needs of the activities taking place there.**

The size and nature of the following areas should meet standards specifications. The size range of all areas discussed are provided in the appendix.

***Standard 3.4.1. Standard Classrooms***

***A. Size:***

*Standard Classroom size is roughly determined by assessment of State Pupil Teacher Ratios (PTR's), a size allocation per student and practical experience. In practice (to leave options for moving classes for different grade levels), the following size ranges are suggested:*

| ***Square Feet*** | | | |
|---|---|---|---|
| ***Type*** | ***Low*** | ***Medium*** | ***High*** |
| *Kindergarten* | *900* | *1050* | *1200* |
| *Full Size Classrooms* | *700* | *800* | *900* |
| *1/2 Size Classrooms* | *350* | *400* | *450* |

The larger the classroom, the more flexible are the options for different programs.

***B. General Needs for all elementary classroom spaces:***

- *Located conveniently to common resources (media center, cafeteria, PE facility)*
- *Natural light*

The allocation of permanent classrooms in a new Elementary School will vary according to need but for a 600 student enrollment the following is typical:

24 Full sized classrooms which includes
- 2 Kindergarten classrooms
- 20 regular classrooms (grades 1-5)
- 1 Special Education resource/"C" level classroom
- 1 Special Education resource/"D" level classrooms

6 1/2 sized classrooms that can be used for a variety of purposes including but not limited to:
- Enrichment (Special Education "B" level gifted)
- OT/PT
- Speech
- Resource specialists
- Counselor

**State Pupil Teacher Ratios (PTR)**

Elementary School PTRs are:

| | |
|---|---|
| K | 1:15 no teaching assistant, 1:20 with teaching assistant |
| 1-3 | 1:22 average classload per teacher |
| 4 - 6 | 1:24 average classload per teacher |

Special Education

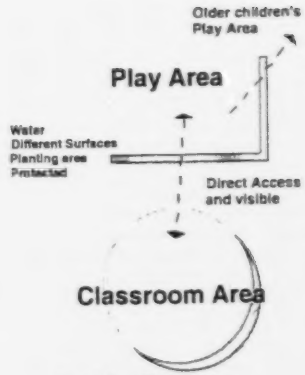
| | |
|---|---|
| A and B Levels | 1:16 Full Classroom (1:8 for half classroom) |
| C Level | 1:16 Full Classroom (1:8 for half classroom) |
| D Level | 1:8 Full Classroom |

Please note that any special education student brought into a class for any reason during the day must be averaged into that teacher's maximum classload.

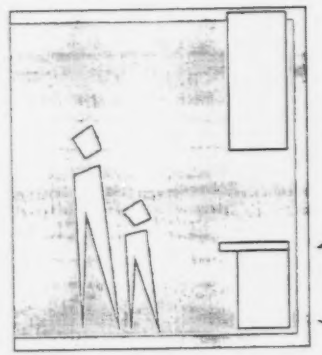
- *Cross ventilation*
- *A minimum of two duplex outlets per wall*
- *Easily maintainable surfaces*
- *A large sink with hot and cold running water*
- *Sufficient Storage organized to avoid clutter.*
- *Standard blackboard and tack board set-ups.*
- *An area for coats that does not clutter the classroom and avoids safety issues of hooks*
- *Carpeted areas as much as possible with a tile area around the sink (proportion of at least 70% carpet to 30% tile).*

***C. Special needs for Kindergarten***

- *Minimum of 900 square feet*
- *Easy or direct access to the outside*
- *A separate kindergarten play area (with water available, variety of play materials) directly accessible from the classroom space*
- *Convenient rest rooms designated and designed for Kindergarten use*
- *Location near a convenient parent pick-up and drop-off space.*
- *Access to oven/stove and refrigerator*
- *Carpeting in central areas and tile in paint/water areas*
- *Furniture and cabinets scaled to kindergarten heights*
- *Doors designed so that little children can use them.*
- *Additional natural light.*




**Inside-Outside "Discovery" Environment**



**Child-sized**

## Provide ample storage

- *Ability to accommodate a computer cart and storage of globes in a standard classroom?*



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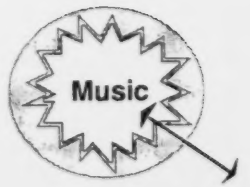
***Standard 3.4.2.*** ***Special Education Spaces***

*Special Education requirements are handled in a flexible manner by SFPS. Generally, Special Education requirements are the same as the regular classrooms except where noted. The allocation for each elementary school will vary according to the specific enrollment needs, but the following is typically minimum:*

- *1/2 classroom for B level gifted programs*
- *1 classroom for C level programs*
- *1 classroom for D level/Resource programs. D level programs may require a time out room (25 sf, with floors and walls carpeted, door with window, light switch and electricity on the outside)*
- *1/2 classroom for speech (sound isolated).*

***Standard 3.4.3.*** ***Fine Arts***

*Every elementary school should have a separate music room sized in the same range as a regular classroom. The music room should be sound-isolated (with sufficient sound insulation and entry vestibule) or located away from regular classroom areas.*




**Sound isolated from rest of activities**

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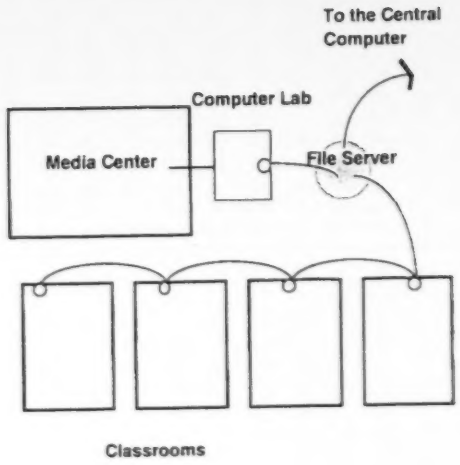
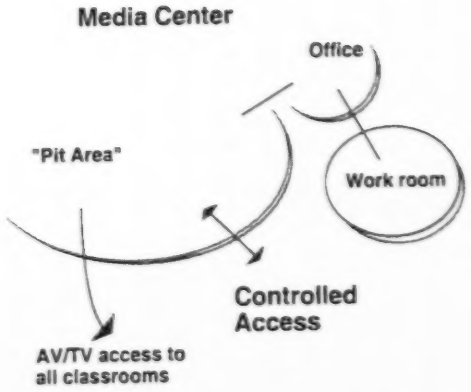
***Standard 3.4.4.*** ***Computer Learning Center***

- *Every school should have the capacity to establish a computer laboratory accommodating a minimum of 15 computer stations.*
- *The computer laboratory should be centrally located near the media center.*
- *Every classroom should be able to accommodate a computer and printer.*
- *There should be conduit into every classroom with a convenient computer port that can eventually be connected to a central file server.*
- *There should be appropriate electrical outlets and surge protection in each classroom to support computer use.*




***Standard 3.4.5.*** ***Library/Media Center***

- *Library/Media Center should be centrally located and convenient to all students.*
- *A library should seat about 10% of the student body. Allowing 30 sf/student, an average sized library is about 2,400 sf in size.*
- *Electrical outlets are needed on every wall and in the floor.*
- *Space should be able to be darkened. Lights should be in individually controlled banks that allow dimming.*
- *Appropriate wiring for audio visual and computer equipment is recommended.*
- *Space should allow for different room arrangements and programs to occur at one time.*







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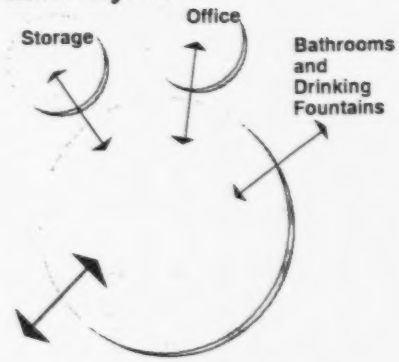
- *There should be an area for story telling, movies and special presentations (this is usually a pit area accessible by a ramp for all students, parents and staff).*
- *There should be limited, controlled access.*
- *There should be tackstrip area above the shelves and around the pit area.*
- *There should be an adjacent office for the librarian.*
- *There should be direct access to the work room.*

***Standard 3.4.6 Physical Education (Interior Area)***

- *An indoor "mini-gym" of a minimum of 2,400 sf net area (40' x 60' with 20' ceiling and tile floor minimum) is required.*
- *The gym should have two basketball goals (adjustable with wall pads, wall eye bolts for net activities, and a climbing rope attachment. (Two additional basketball goals in the gym are recommended.) A minimum of six feet of space between the baskets and the wall is required.*
- *Floor inserts for volleyball are recommended.*
- *The "mini-gym" should be located near the exterior playgrounds and recreation fields and away from classrooms.*
- *An office is required and sufficient storage is required (400 sf, minimum).*

The exterior physical education specifications are discussed in Policy 1.7.

**Mini-Gyms**

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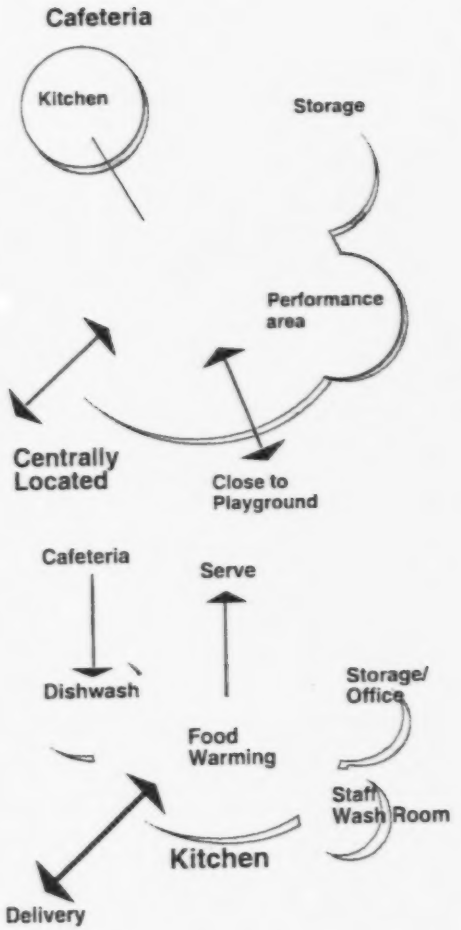
***Standard 3.4.7.*** ***Cafeteria***

*Cafeterias serve as a food serving area as well as a multi-purpose area for school activities.*

- *The cafeteria should be centrally located to the student population.*
- *The cafeteria should be sized to seat 200 students at one sitting (a maximum of 4 lunch periods). Allowing 10-15 sf/seat student an average cafeteria is about 3,000 sf in size.*
- *There should be ample storage available to store folding tables and chairs for special events (250 - 500 sf).*
- *There should be an area for performances and presentations with adjacent storage and appropriate access.*
- *The ceiling should be acoustically treated to absorb sound.*
- *An effort should be made to create a "non - institutional" environment.*
- *There should be windows to the outside.*
- *There should be an opportunity to self-serve as well as cafeteria serve.*




***Standard 3.4.8.*** ***Kitchen***

- *The kitchen should be about 1,000 sf and include the following areas:*
  - *Food preparation area (requires a 3 compartment sink).*
  - *Serving area (unless there is a buffet in cafeteria area)*
  - *Dishwashing area*
  - *Cold Storage*
  - *Hot Storage*

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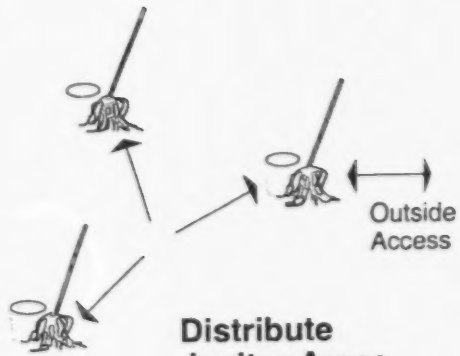
- *Dry storage (this area can share space with the office).*
- *Rest room for the staff with lockers*
- *Office with telephone*
- *Janitor closet*

- *There should be an 18" min. backsplash around stoves, sinks, and dirty tray drop-off.*
- *The area should be free of any hazards to students (e.g. hot serving line surfaces)*
- *There should be sufficient access for delivery vehicles*
- *There should be sufficient access for trash pick-up*
- *There should be a separate, shielded exterior trash area nearby to the Kitchen*
- *Surfaces should be able to be disinfected.*

***Standard 3.4.9.*** ***Utility/Storage***

***A. Custodial Storage***

- *There should be 2-3 interior custodial areas per elementary school.*
- *They should be distributed in a manner that is appropriate to serve all school areas in a convenient manner.*
- *Each custodial closet should be from 120-200 sf in size and have a janitors mop sink.*
- *There should be sufficient shelves for storage*
- *There should be access to the roof from one of the custodial storage areas.*




**Distribute Janitor Areas**

**B. Facility Storage**

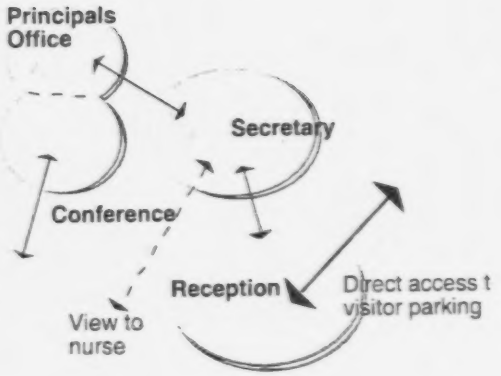
*There should be as much storage in the school as possible. Newer SFPS elementary schools devote about 3% of the net area to storage including:*

- *Assigned storage associated with specific rooms (Gym, cafeteria, classrooms).*
- *Unassigned storage (2 areas 80-200 sf each) that can be used for a variety of purposes including book storage.*
- *Exterior storage of 120-200 sf in size directly accessible to the outside.*

**Standard 3.4.10. Administrative/Support Areas**

**A. Administrative Offices**

- *There should be available a suitable reception area for students, teachers and visitors. There should be a display area for student art.*
- *The Principal's office should be easily found by visitors.*
- *Administration area should have a principal's office, conference room (directly accessible to the principals office and to the school), office, storage , reception area, secretarial and nurses area.*
- *The secretary should have a clear view of the nurses office from the reception area or wherever the secretary is located.*
- *There should be ample and conveniently located storage that includes a secure place for permanent*



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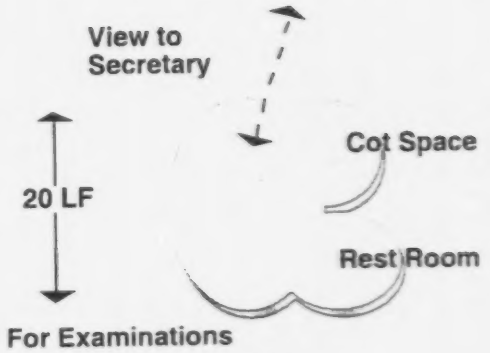
*records (fire files are supplied).*

- *A small safe set into the floor for petty cash.*
- *There should be ability to connect the administrative office to the Central Office computer.*

### *B. Nurse's Office*

*The Health room should be adjacent to and entered by way of the school's central control area. The area should be:*

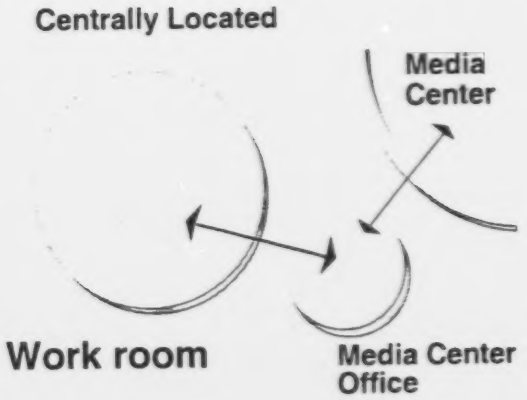
- *Sized from 250 to 350 sf.*
- *In the administration cluster area. The school secretary should have direct visual contact with nurse's reception area.*
- *Adequate reception area for students and visitors.*
- *Sufficient space (20 linear feet) to conduct eye examinations.*
- *A desk area for the nurse with a telephone (separate line).*
- *Sufficient cot space (1 cot per 250 students).*
- *A sink area with lockable cabinets.*
- *A lockable medication cabinet.*
- *Be handicapped accessible.*
- *Able to be easily cleaned*
- *Proper equipment present (Icemaker and refrigerator)*
- *Adequate rest rooms for functions performed (1 water closet, 1 lavatory minimum).*




**Nurses Area**

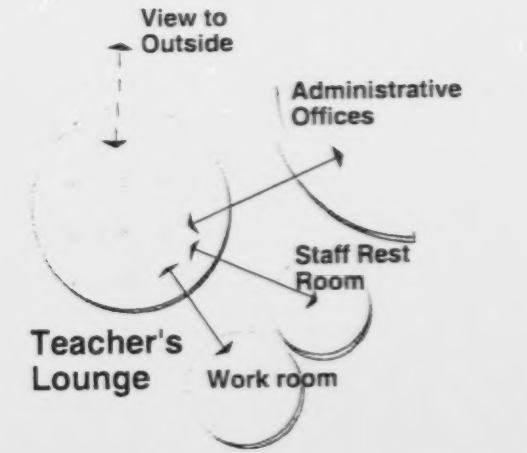
**C. Workroom**

- *The workroom should be about 800 sf in size.*
- *It should be centrally located with direct access to the Media Center.*
- *There should be sufficient permanent lockable storage (268 cubic feet minimum):*
  - *Base cabinets (180 cf, 10 units, 3'0" high x 3'0" wide x 2'0" deep)*
  - *Upper cabinets (87.8 cf, 11 units, 2'0" high x 3'0" wide x 1'4" deep)*
- *There should be a sink area.*
- *There should be sufficient storage area for up to 10 rolling carts.*
- *It should accommodate a variety of shelving systems for storage of books, supplies and audio-visual material.*
- *It should have the ability to accommodate a desk for an educational assistant.*




**D. Teachers' Lounge**

- *The Teachers' lounge should be located near the administrative offices, work room and staff rest rooms.*
- *The lounge should be 800 sf minimum in size.*
- *There should be a small kitchen with a refrigerator, microwave oven, hot plate and sink.*
- *There should be space for two vending machines*
- *There should be a telephone and means to afford privacy during telephone conversations.*
- *There should be staff mail boxes.*
- *There should be windows and, ideally, access to an outside patio area.*



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- *Walls should be able to accommodate tack boards and various displays.*

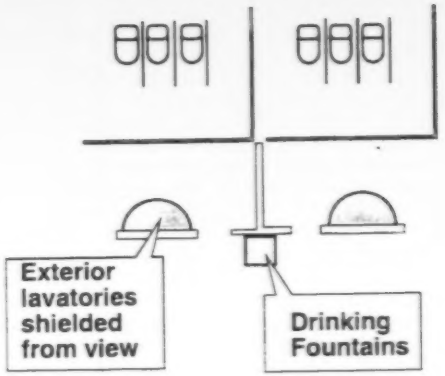
***E. Rest Rooms***

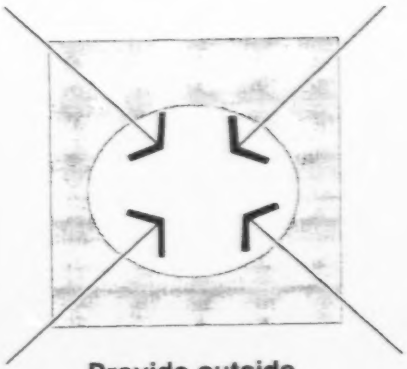
- *Rest rooms should be located so that they are accessible to both staff and students:*
  - *Student rest rooms central to all activities (access to all wings)*
  - *Separate rest rooms convenient to the kindergarten*
  - *Rest rooms convenient to portables*
  - *Rest rooms convenient to playgrounds*
  - *At least one of each fixture in each rest room will be accessible.*
- *Staff Rest Rooms*
  - *Staff rest rooms should be central to all activities.*
  - *Plumbing fixtures should be determined to reflect the fact that more women than men generally teach at the elementary level.*

***Standard 3.4.11. Outside Gathering Areas***

*There should be exterior space central to school users that permits social gathering of students during leisure time and for group presentations (e.g. commons area, amphitheater).*

**Student Rest rooms**



**Provide outside gathering areas**

***Policy 3.5 Environment for Education***
**School should provide a pleasant environment for students and staff and a positive contribution to the community.**

***Standard 3.5.1 Overall Design***
*Overall design should be pleasing to age group served.*

***Standard 3.5.2 Positive Addition to the Community***
*Facility should provide an attractive and positive addition to the community.*

***Standard 3.5.3 Materials***
*Facility materials should provide attractive color and texture.*

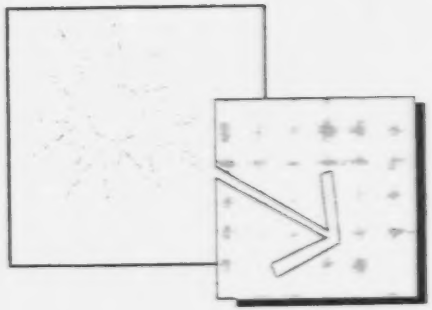
***Standard 3.5.4 School Entrance***
*Entrance of facility should be easily identified.*

***Standard 3.5.5 Sheltered Entrances***
*Entrances and walkways should provide shelter from sun and inclement weather.*

***Standard 3.5.6 Natural Light***
*Learning areas should provide natural light.*

***Standard 3.5.7 Operable Windows***
*Learning areas should have operable windows.*

***Standard 3.5.8 Exterior Noise***
*Exterior noise should not be a distraction in the classroom.*



**Maximize Natural Light into Learning Areas**

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***Standard 3.5.9*** ***Color Schemes***

*Color schemes, building materials and decor should provide an impetus to learning.*

***Standard 3.5.10*** ***Furniture and Equipment***

*Furniture and equipment should provide a pleasing atmosphere.*

***Standard 3.5.11*** ***Use of Outdoors for Instructional Purposes***

*Facility and site design allows classrooms to use outdoors for instructional purposes (e.g., outdoor courtyards or patios near classrooms available for use).*

# Appendix A

## Elementary School Criteria for Assignable Square Feet

**Site**

Site Size (acres)

| | Low | Average | High |
|---|---|---|---|
| Elementary Schools | 7.5 | 10 | 15 |
| Middle Schools | 15 | 20 | 30 |
| High Schools | 30 | 40 | 50 |

Parking

- One space for each teacher and staff member (for maximum planned enrollment levels).
- Five spaces for visitors conveniently located near the school office.
- Spaces for 50% of the student enrollment [High School]. Student parking should be separated from staff and visitor parking.
- 4% of parking spaces should be handicapped designated.
- There should be some way to accommodate parking for special events.

**Instructional Spaces**
25-30 sf/student as a general rule

State PTR Ratios

| | |
|---|---|
| K | 1:15 no teaching assistant, 1:20 with teaching assistant |
| 1-3 | 1:22 average classload per teacher |
| 4 - 6 | 1:24 average classload per teacher |

Special Education

| | |
|---|---|
| A and B Levels | 1:16 Full Classroom (1:8 for half classroom) |
| C Level | 1:16 Full Classroom (1:8 for half classroom) |
| D Level | 1:8 Full Classroom |

Please note that any special education student brought into a class for any reason during the day must be averaged into that teacher's maximum classload.



**Elementary Classrooms**

| | Low | Medium | High |
|---|---|---|---|
| Kindergarten | 900 | 1050 | 1200 |
| Elementary | 700 | 800 | 900 |

| | |
|---|---|
| Library | 15% of student body.<br>25-30 sf/student |

| | |
|---|---|
| Special Education | 35-45 sf/student |

| **Administration** | |
|---|---|
| Principal's Office | 200-250 sf |
| Asst. Principal | 150-200 sf |
| Reception | 200-250 sf |
| Storage | 75-100 sf |
| Vault | 50-75 sf |
| Clerk | 100-150 sf |
| Lobby | 200 sf |
| Nurse/Clinic | 500-550 sf |

| **Support** | |
|---|---|
| Kitchen | 2 sf/meal served |
| Serving | 0.5-0.8 sf/capacity of dining room |
| Dining | 10-15 sf per seated student |
| Teachers Lounge | 15 sf per occupant |
| Book room | 100-200 per wing or floor |
| Library/Media Center | |
| Seating | 10% of the student body at 30 sf/student (including stacks). |

# Appendix B

## Needs Analysis for a Prototypical Elementary School

The following charts apply the proposed policies and standards to a prototypical elementary school for 600 student enrollment. This information is meant to be a broad guide future facility planning.

| Room Description | # of Spaces | # of Persons | Area/ Person | Space Criteria | Total Area | TOTAL ASSIGNABLE |
|---|---|---|---|---|---|---|
| **Instructional (Permanent)*** | | | | | | |
| *Full Size Classrooms (20)* | | | | | | |
| Kindergarten Classrooms | 2 | 20 | 50 | | 1,000 | 2,000 |
| Regular Classrooms ( grades1 to 5) | 20 | | | 840 | 840 | 16,800 |
| Special Education "C" level | 1 | | | 840 | 840 | 840 |
| Special Education "D" level (with time-out room) | 1 | | | 880 | 880 | 880 |
| *1/2 Size Classrooms (6)* | 6 | | | 420 | 420 | 2,520 |
| "B" Level Gifted | | | | | | |
| Speech | | | | | | |
| (Other: Bilingual, Resource Specialist Areas) | | | | | | |
| | | | | NET ASSIGNABLE | | 23,040 |
| | | | | Contingency at Efficiency at 70% | | 9,874 |
| | | | | **GROSS ASSIGNABLE** | | **32,914** |

* Classroom allocation varies to respond to special enrollment characteristics.

| Room Description | # of Spaces | # of Persons | Area/ Person | Space Criteria | Total Area | *TOTAL ASSIGNABLE* |
|---|---|---|---|---|---|---|
| **Special Instructional Areas** | | | | | | |
| Media Center/Library | 1 | 80 | 30 | | 2,400 | 2,400 |
| Librarian Office | 1 | 1 | 150 | | 150 | 150 |
| Computer Laboratory | 1 | | | 420 | 420 | 420 |
| Workroom | 1 | | | 840 | 840 | 840 |
| Physical Education (Gym) | 1 | | | 2400 | 2,400 | 2,400 |
| Office | 1 | 1 | 120 | | 120 | 120 |
| Storage | 1 | | | 240 | 240 | 240 |
| Music Room | 1 | | | 840 | 840 | 840 |
| | | | | NET ASSIGNABLE | | 7,410 |
| | | | | Contingency at Efficiency at 70% | | 3,176 |
| | | | | **GROSS ASSIGNABLE** | | **10,586** |

| Room Description | # of Spaces | # of Persons | Area/ Person | Space Criteria | Total Area | TOTAL ASSIGNABLE |
|---|---|---|---|---|---|---|
| **Support** | | | | | | |
| Cafeteria | 1 | 200 | 15 | | 3,000 | 3,000 |
| Storage | 3 | | | 200 | 200 | 600 |
| Platform | 1 | | | 250 | 250 | 250 |
| Kitchen | 1 | | | 650 | 650 | 650 |
| Kitchen Pantry Storage | 1 | | | 150 | 150 | 150 |
| Dishwashing | 1 | | | 250 | 250 | 250 |
| Office | 1 | | | 120 | 120 | 120 |
| Storage | 4 | | | 200 | 200 | 800 |
| | | | | NET ASSIGNABLE | | 5,820 |
| | | | | Contingency at 0% | | 0 |
| | | | | Efficiency at 70% | | 2,494 |
| | | | | **GROSS ASSIGNABLE** | | **8,314** |

| Room Description | # of Spaces | # of Persons | Area/ Person | Space Criteria | Total Area | *TOTAL ASSIGNABLE* |
|---|---|---|---|---|---|---|
| **Administration** | | | | | | |
| Principals Office w/Conference | 1 | | | 400 | 400 | 400 |
| Assistant Principal | 1 | | | 150 | 150 | 150 |
| Secretary | 1 | | | 120 | 120 | 120 |
| Waiting | 1 | 5 | 30 | | 150 | 150 |
| Files | 1 | | | 40 | 40 | 40 |
| Storage | 1 | | | 120 | 120 | 120 |
| General Reception | 1 | 5 | 30 | | 150 | 150 |
| Teachers Lounge | 1 | | | | 840 | 840 |
| Nurse | 1 | | | 250 | 250 | 250 |
| | | | | | 0 | |
| Conference | 1 | 15 | 20 | | 300 | 300 |
| | | | | | 0 | 0 |
| | | | | NET ASSIGNABLE | | 2,520 |
| | | | | Contingency at 0% | | 0 |
| | | | | Efficiency at 70% | | 1,080 |
| | | | | **GROSS ASSIGNABLE** | | **3,600** |

**Prototypical Elementary School - 1993**
**ESTIMATE OF PROBABLE COST OF CONSTRUCTION**

| | | |
|---|---|---|
| A. Construction Cost | $65.12 /SF X55,414 | $3,608,600 |
| B. Fixed Equipment | 8.0% of A | $288,700 |
| C. Site Development Cost | 15.0% of A | $541,300 |
| D. New Mexico Gross Receipts Tax | 6.1250% of A,B,C | $271,900 |
| **E. TOTAL CONSTRUCTION COST (A+B+C)** | **$85.01** | **$4,710,500** |
| F. Site Acquisition Cost | of D | |
| G. Moveable Equipment | 5.0% of D | $235,500 |
| H. Professional Fees | 7.0% of D | $329,700 |
| I. Administration | 2.5% of D | $117,800 |
| J. New Mexico Gross Receipts Tax | 6.1250% of G,H,I | $41,800 |
| **K. TOTAL PROJECT COST (SUM OF D to I)** | **$98.08** | **$5,435,300** |

**Prototypical Elementary School**

| | Assignable Area (Square Feet) Net | Gross | Percent Total Gross |
|---|---|---|---|
| Instructional (Permanent) | 23,040 | 32,914 | 59.4% |
| Special Instructional Areas | 7,410 | 10,586 | 19.1% |
| Support | 5,820 | 8,314 | 15.0% |
| Administration | 2,520 | 3,600 | 6.5% |
| | 38,790 | 55,414 | 100.0% |

| Site Requirements | # | Area (S.F.) | Acres |
|---|---|---|---|
| Permanent Buildings* | | | 1.27 |
| Portable Buildings | 8 | 840 | 0.15 |
| Visitor/Staff Parking | 85 | 350 | 0.68 |
| Bus Pick-up/Drop Off | 1 | | 0.69 |
| Play Areas | | | |
| Kindergarten | | | 0.19 |
| Asphalt Play Area | | | 0.58 |
| ıed Field (1- 180' x 320 | | | 1.32 |
| ıcrete Pad (2- 40' x 60 | | | 0.11 |
| Softball Fields | | | 0.74 |
| | | Net | 5.75 |
| | | Tare** at 30% | 2.46 |
| | | Total Minimum Site | 8.21 acres |

* Assuming one story construction
** Roadways, landscaping, walks

# Appendix C

## Handicapped Accessibility Checklist

*Please note: that an ADA facility checklist is being developed and will be available 5/94.*

**Parking and Entry:**

Is there handicapped accessible parking which meets the following criteria:

- Close to a main entry of the building
- 14 foot wide space for use by a van with a wheelchair lift
- Designated handicapped spaces
- Clearly marked parking spaces
- Curb cuts from parking lot to walkway to building
- Curb cuts should not extend into access aisle

- Unobstructed access from parking area to building entrance (level or by ramps).
- Ramps have a maximum slope of 1 inch vertical rise in 12 inches horizontal run (8.33% slope).
- Ramps have a handrails on both sides and landings for each 30" rise.

**Doors**

- All doors provide 32 inch of clear opening.
- Pressure to open entry door 8 pounds of pull or less.
- Pressure to open interior doors of 5 pounds of pull or less.
- Doors with threshold of 1/2 inch or more are beveled for wheelchair access.

**Rest room**

- Rest rooms have a clear turn-around area with a circular diameter of at least 60 inches.
- Does one stall in each rest room have a 36 inch by 69 inch space

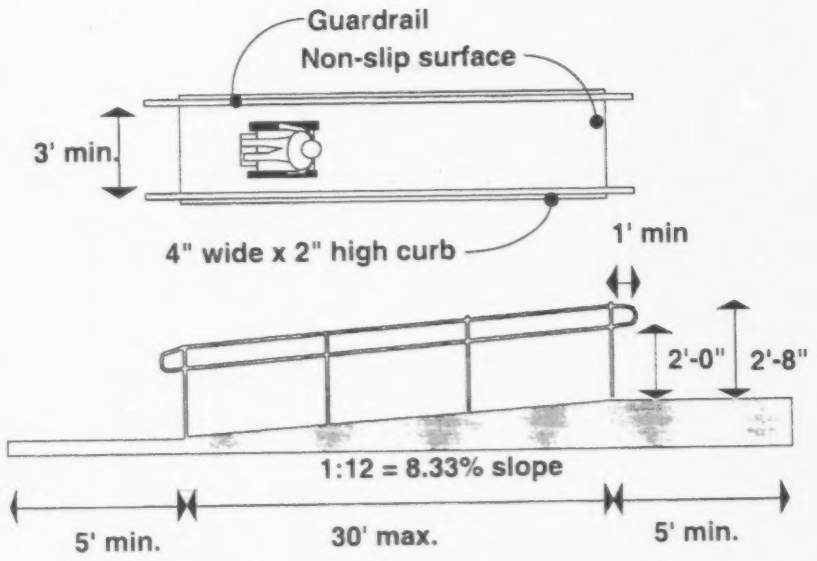
**Note**:
Applicable documents to consult regarding barrier free access include:

- Uniform Building Code (Accessibility and Exits)
- Americans with Disabilities Act (ADA).
- American National Standards Institute (ANSI), Specifications for making buildings and Facilities Accessible to and Usable by Physically Handicapped People (Handicapped Accessibility)
- 67-3-64 NMSA 1978, Ramps for handicapped required
- 28-7-3 NMSA 1978, Equal rights to use public facilities
- JV 13-1316 NMSA 1978, Duties where property abuts sidewalk
- UBC 509 (g), " Provide an unobstructed means of egress to a public way"
- ANSI 4.3, Accessible route (requires accessible routes to all site facilities)
- 28-1-7.J. NMSA 1978, Unlawful discriminatory practice
- 60-13-44.D NMSA 1978, Trades bureaus, standards, conflicts
- 66-7-352.3 NMSA 1978, Disabled parking Standards and Parking Act.

The Governor's Committee on the Concerns of the Handicapped has additional information.

with a 32 inch door for front entry or 34 inch door for side entry which swings out.

- Handicapped accessible toilets has grab bars (1.25-1.5 inches in diameter) mounted 1.5 inches from the wall and 33-36 inches from the floor.
- Top of porcelain surface of the commode bowl is 15-17 inches from the floor.
- Lavatories have 24 inch knee clearance beneath them.




**Ramps**

- All ramps should have a slope of at least 12 inches of horizontal run for each inch of vertical rise.
- All ramps have non-skid surface.
- Ramps leading to doorways have a 5 foot by 5 foot level area at the turn or curve.
- Ramps that are 30 feet or longer have a five foot by five foot level area at 30 foot intervals.
- Ramps with vertical rise greater than 6 inches have handrails on both sides.

**Other**

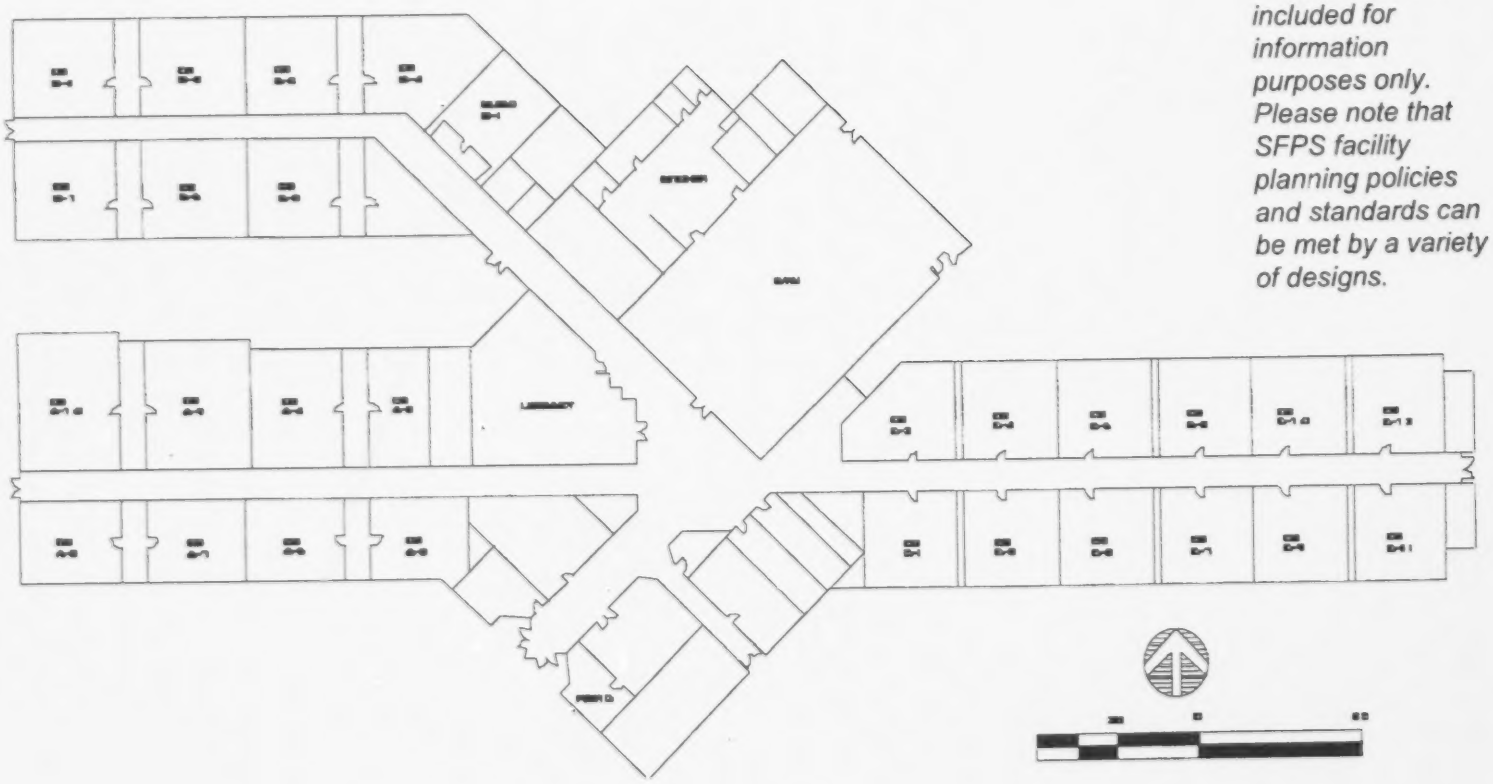
- Walkways, hallways, aisles and corridors are 44 inches wide.
- Spout of water fountain is 30 inches above the floor. The flow of water should be 4" high.
- Public telephones mounted 48 inches or less from the floor.
- Wall mounted controls, towels, trash receptacles, vending machines, mirrors mounted 36 inches from the floor.

# Appendix D

## School Illustrative Plan

*This is the floor plan for Turquoise Trail Elementary School.*

*This floor plan is included for information purposes only. Please note that SFPS facility planning policies and standards can be met by a variety of designs.*



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